

Gray County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/11/2018

Using the most recent IMPLAN data available (2016) adjusted for 2018, 19 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Gray County economy.¹

These 19 sectors have a total direct output of approximately **\$568.5 million** and support **863 jobs** in Gray County. Running the model for all 19 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Gray County Economy						
Impact Type ²	Employment	% Employment	Total Value Added ³	Total Value Added % of Gross Regional Product ⁴	Output ⁵	Output % of Gross Regional Product
Direct Effect	862.7	17.28%	\$109,325,761	26.96%	\$568,466,056	140.20%
Indirect Effect	703.2	14.09%	\$59,627,683	14.71%	\$102,969,506	25.39%
Induced Effect	405.2	8.12%	\$26,996,444	6.66%	\$49,792,892	12.28%
Total Effect	1971.0	39.49%	\$195,949,888	48.33%	\$721,228,454	177.87%

As shown in the above table, agriculture, food, and food processing sectors support **1,971 jobs**, or **39.49%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$721.2 million, roughly 177.87% of the economy.**

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 19 agriculture, food, and food processing sectors is approximately **\$195.9 million, or 48.33% of the GRP.** This indicates that personal income, business income, and taxes generated by these sectors account for **48.33% of the total economy.**

The following tables document the top industries affected by employment and output, as well as a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:

http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value added = labor income + indirect business taxes + other property type income.

⁴ GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

⁵ Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **641 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Gray County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	640.7	\$372,323,931
Wholesale trade	204.3	\$48,716,221
Support activities for agriculture and forestry	180.4	\$8,825,995
Truck transportation	89.1	\$16,091,848
Grain farming	74.4	\$108,322,222
Real estate	57.2	\$6,053,953
Individual and family services	38.1	\$767,685
Other animal food manufacturing	37.4	\$48,511,132
Monetary authorities and depository credit intermediation	30.5	\$5,320,142
Other financial investment activities	27.8	\$3,544,958

The beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector directly contributes approximately **\$372.3 million** to the Gray County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	640.7	\$372,323,931
Grain farming	74.4	\$108,322,222
Wholesale trade	204.3	\$48,716,221
Other animal food manufacturing	37.4	\$48,511,132
Truck transportation	89.1	\$16,091,848
Owner-occupied dwellings	0.0	\$13,091,787
Dairy cattle and milk production	24.6	\$11,042,889
Support activities for agriculture and forestry	180.4	\$8,825,995
Farm machinery and equipment manufacturing	13.2	\$6,754,487
Oilseed farming	1.7	\$6,352,868

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Gray County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	Total Employment	Total Output
Oilseed farming	1.7	\$6,352,867.71
Grain farming	74.4	\$108,322,221.65
Vegetable and melon farming	0.7	\$147,294.97
Greenhouse, nursery, and floriculture production	5.4	\$709,926.50
Cotton farming	3.4	\$959,090.90
All other crop farming	5.4	\$1,494,097.50
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	640.7	\$372,323,930.83
Dairy cattle and milk production	24.6	\$11,042,889.15
Poultry and egg production	1.7	\$1,734,914.50
Animal production, except cattle and poultry and eggs	12.7	\$4,331,996.16
Commercial logging	1.4	\$61,184.29
Commercial hunting and trapping	2.8	\$56,991.54
Other animal food manufacturing	37.4	\$48,511,131.93
Bread and bakery product, except frozen, manufacturing	2.5	\$278,374.01
Frozen cakes and other pastries manufacturing	0.1	\$18,862.08
Farm machinery and equipment manufacturing	13.2	\$6,754,486.89
Lawn and garden equipment manufacturing	6.1	\$3,170,328.79
Veterinary services	5.2	\$603,755.98
Landscape and horticultural services	23.4	\$1,591,710.25

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Gray County, the retail sector was omitted.